

about 180 to about 800 nanometers. High transmissivity is typically preferred because it allows thicker films to be produced without significant reduction in radiation intensity passing through the film.

---

**In the Claims**

Please add new claims 27-32. The new claims are provided below in clean form. Per 37 C.F.R. §1.121, the new claims are also shown in Appendix A with notations to indicate changes made (for convenience, all pending claims, including those added hereby, are provided in Appendix A).

---

27. (NEW) A fluid handling device comprising a substrate and an optically transmissive diamond-like film disposed on at least a portion of the substrate, wherein the film comprises diamond-like glass comprising a dense random covalent system comprising on a hydrogen-free basis at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than or equal to about 45 atomic percent oxygen, and further wherein the film exhibits substantially no fluorescence.

28. (NEW) A fluid handling device comprising a microfluidic article comprising a microfluidic handling architecture comprising a fluid handling surface wherein at least a portion of the fluid handling surface includes a hydrophilic diamond-like film disposed thereon, wherein the film comprises diamond-like glass comprising a dense random covalent system comprising on a hydrogen-free basis at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than or equal to about 45 atomic percent oxygen, and further wherein the film exhibits substantially no fluorescence.

29. (NEW) A fluid handling device comprising a substrate and an optically transmissive diamond-like film disposed on at least a portion of the substrate, wherein the film

comprises diamond-like glass comprising a dense random covalent system comprising on a hydrogen-free basis at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than or equal to about 45 atomic percent oxygen, and further wherein the film is at least 50 percent transmissive to radiation at one or more wavelengths from about 180 to about 800 nanometers.

30. (NEW) A fluid handling device comprising a microfluidic article comprising a microfluidic handling architecture comprising a fluid handling surface wherein at least a portion of the fluid handling surface includes a hydrophilic diamond-like film disposed thereon, wherein the film comprises diamond-like glass comprising a dense random covalent system comprising on a hydrogen-free basis at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than or equal to about 45 atomic percent oxygen, and further wherein the film is at least 50 percent transmissive to radiation at one or more wavelengths from about 180 to about 800 nanometers.

31 (NEW) A method of manufacturing a hydrophilic diamond-like film, the method comprising treating a diamond-like film in an oxygen-containing plasma, wherein the film comprises diamond-like glass comprising a dense random covalent system comprising on a hydrogen-free basis at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than or equal to about 45 atomic percent oxygen, and further wherein the film exhibits substantially no fluorescence.

32. (NEW) A method of manufacturing a hydrophilic diamond-like film, the method comprising treating a diamond-like film in an oxygen-containing plasma, wherein the film comprises diamond-like glass comprising a dense random covalent system comprising on a hydrogen-free basis at least about 30 atomic percent carbon, at least about 25 atomic percent silicon, and less than or equal to about 45 atomic percent oxygen,

**Amendment and Response**

Serial No.: 09/519,448

Confirmation No.: 6966

Filed: 5 March 2000

For: FLUID HANDLING DEVICES WITH DIAMOND-LIKE FILMS

---

Page 4 of 10

and further wherein the film is at least 50 percent transmissive to radiation at one or more wavelengths from about 180 to about 800 nanometers.

32  
SJP  
C21

---